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10/634,053	08/04/2003	Michael J. Hasday	Y1520-00001	5522

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EXAMINER

NGUYEN, KIM T

ART UNIT	PAPER NUMBER
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3714

DATE MAILED: 11/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/634,053

Applicant(s)

HASDAY, MICHAEL J.

Examiner

Kim T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20, 34 and 38-53 is/are pending in the application.
- 4a) Of the above claim(s) 14-20 and 34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 38-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

According to the Panel Decision from Pre-appeal brief Review, the rejection issued on 3/23/06 is withdrawn and a new office action is addressed as following:

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-13 and 38-53 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding the requirement under 35 U.S.C. §101 that a claimed invention be limited to the technological arts in order to be deemed statutory, the Examiner submits that the phrase "technological arts" has been created and used by the courts to offer another view of the term "useful arts". See *In re Musgrave*, 167 USPQ (BNA) 280 (CCPA 1970). Hence, the first test of whether an invention is eligible for a patent is to determine if the invention is within the "technological arts".

Further, despite the express language of §101, several judicially created exceptions have been established to exclude certain subject matter as being patentable subject matter covered by §101. These exceptions include "laws of nature", "natural phenomena", and "abstract ideas." See *Diamond v. Diehr*, 450, U.S. 175, 185, 209 USPQ (BNA) 1, 7 (1981). However, courts have found that even if an invention incorporates abstract ideas, such as mathematical algorithms, the invention may nevertheless be statutory subject matter if the invention as a whole

produces a "useful, concrete and tangible result". See State Street Bank & Trust Co v. Signature Financial Group, Inc. 149 F.3d 1368, 1973, 47 USPQ2d (BNA) 1596 (Fed. Cir. 1998). This addresses the second test under 35 U.S.C §101 of whether or not an invention is eligible for a patent. The Manual of Patent Examining Procedure reiterates this point. More specifically, MPEP §2106(II)(A)" states, "The claimed invention as a whole must accomplish a practical application. That is, it must produce a 'useful, concrete and tangible result'. State Street, 149 F.3d at 1373, 47 USPQ2d at 1601-02". Furthermore, "Only when the claim is devoid of any limitation to a practical application in the technological arts should it be rejected under 35 U.S.C. §101." (MPEP §2106(II)(A)).

This "two prong" test was evident when the Court of Customs and Patent Appeals (CCPA) decided an appeal from the Board of Patent Appeals and Interferences (BPAI). See In re Toma, 197 USPO (BNA) 852 (CCPA 1978). In Toma, the court held that the recited mathematical algorithm did not render the claim as a whole non-statutory using the Freeman-Walter-Abele test as applied to Gottschalk v. Benson, 409 U.S. 63, 175 USPO (BNA) 673 (1972). Additionally, the court decided separately on the issue of the "technological arts". The court developed a "technological arts" analysis:

The "technological" or "useful" arts inquiry must focus on whether the claimed subject matter...is statutory, not on whether the product of the claimed subject matter...is statutory, not on whether the prior art which the claimed subject matter purports to replace...is statutory, and not on whether the claimed subject matter is presently perceived to be an improvement over the prior art, e.g., whether it "enhances" the operation of a machine. In re Toma at 857.

In *Toma*, the claimed invention was a computer program for translating a source human language (e.g., Russian) into a target human language (e.g., English). The court found that the claimed computer implemented process was within the "technological art" because the claimed invention was an operation being performed by a computer within a computer.

The decision in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* never addressed this prong of the test. In *State Street Bank & Trust Co.*, the court found that the "mathematical exception" using the *Freeman-Walter-Abele* test has little, if any, application to determining the presence of statutory subject matter but rather, statutory subject matter should be based on whether the operation produces a "useful, concrete and tangible result." See *State Street Bank & Trust Co.* at 1374. Furthermore, the court found that there was no "business method exception" since the court decisions that purported to create such exceptions were based on novelty or lack of enablement issues and not on statutory grounds. Therefore, the court held that "[w]hether the patent's claims are too broad to be patentable is not to be judged under §101, but rather under §102, 103 and 112." See *State Street Bank & Trust Co.* at 1377. Both of these analyses go towards whether the claimed invention is non-statutory because of the presence of an abstract idea. *State Street* never addressed the first part of the analysis, i.e., the "technological arts" test established in *Toma* because the invention in *State Street* (i.e., a computerized system for determining the year-end income, expense, and capital gain or loss for the portfolio) **was already determined to be within the technological arts** under the *Toma* test. This dichotomy has been recently acknowledged by the Board of Patent Appeals and

Interferences in affirming a §101 rejection finding the claimed invention to be non-statutory for failing the technological arts test. See Ex parte Bowman, 61 USPQ2d (BNA) 1669 (BdPatApp&Int 2001).

What is indeed important to note in the Bowman decision is that the Board acknowledged the dichotomy of the analysis of the claims under 35 U.S.C. §101, thereby emphasizing the fact that not only must the claimed invention produce a "useful, concrete and tangible result," **but that it must also be limited to the technological arts** in order to be deemed statutory under the guidelines of 35 U.S.C. §101. The Board very explicitly set forth this point:

[1] We agree with the examiner. Appellant has carefully avoided tying the disclosed and claimed invention to any technological art or environment. As noted by the examiner, the disclosed and claimed invention is directed to nothing more than a human making mental computations and manually plotting the results on a paper chart [answer, page 5]. The Examination Guidelines for Computer-Related Inventions are not dispositive of this case because there is absolutely no indication on this record that the invention is connected to a computer in any manner.

Despite the express language of 35 U.S.C. §101, several judicially created exceptions have been excluded from subject matter covered by Section 101. These exceptions include laws of nature, natural phenomenon, and abstract ideas. See Diamond v. Diehr, 450 U.S. 175, 185, 209 USPQ 1, 7(1981). We interpret the examiner's rejection as finding that the claimed invention before us is nothing more than an abstract idea because it is not tied to any technological art or environment. Appellant's argument is that the physical (even manual) creation of a chart and the plotting of a point on this chart places the invention within the technological arts.

The phrase "technological arts" has been created to offer another view of the term "useful arts." The Constitution of the United States authorizes and empowers the government to issue patents only for inventions which promote the progress [of science and] the useful arts. We find that the invention before us, as disclosed and claimed, does not promote the progress of science and the useful arts, and does not fall within the definition of technological arts. The abstract idea which forms the heart of the invention before us does not become a technological art merely by the recitation in the claim of "transforming physical media into a chart" [sic, drawing or creating a chart] and "physically plotting a point on said chart."

In summary, we find that the invention before us is nothing

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more than an abstract idea which is not tied to any technological art, environment, or machine, and is not a useful art as contemplated by the Constitution of the United States. The physical aspects of claim 1, which are disclosed to be nothing more than a human manually drawing a chart and plotting points on this chart, do not automatically bring the claimed invention within the technological arts. For all these reasons just discussed, we sustain the examiner's rejection of the appealed claims under 35 U.S.C. §101. See Ex parte Bowman, 61 USPQ2d (BNA) 1669, 1671 (BdPatApp&Int 2001).

Similarly, in the present application, claims 1-13 and 38-53 are deemed to be non-statutory because they are not limited to the technological arts; all recited steps could be performed manually by a human, thereby reinforcing the fact that Appellant's invention fails to "[p]romote the progress of science and useful arts," as intended by the United States Constitution under Art. I, §8, cl.8 regarding patent protection.

In conclusion, the Examiner submits that Appellant's claims do not meet the technological arts requirement under 3 U.S.C. §101, as articulated in Musgrave, Toma, and Bowman as well as the Manual of Patent Examining Procedure.

Requirements for Information- 37 CFR § 1.105

2. Applicant is requested to provide information concerning how to determine competitive partners. Refer to rule 37 CFR § 1.105 for directions on collecting relevant information. For example:

- (i) *Commercial databases* : The existence of any particularly relevant commercial database known to any of the inventors that could be searched for a particular aspect of the invention.
- (ii) *Search* : Whether a search of the prior art was made, and if so, what was searched.
- (iii) *Related information* : A copy of any non-patent literature, published application, or patent (U.S. or foreign), by any of the inventors, that relates to the claimed invention.
- (iv) *Information used to draft application* : A copy of any non-patent literature, published application, or patent (U.S. or foreign) that was used to draft the application.
- (v) *Information used in invention process* : A copy of any non-patent literature, published application, or patent (U.S. or foreign) that was used in the invention process, such as by designing around or providing a solution to accomplish an invention result.
- (vi) *Improvements* : Where the claimed invention is an improvement, identification of what is being improved.
- (vii) *In Use* : Identification of any use of the claimed invention known to any of the inventors at the time the application was filed notwithstanding the date of the use.
- (viii) *Technical information known to applicant* . Technical information known to applicant concerning the related art, the disclosure, the claimed subject matter, other factual information pertinent to patentability, or concerning the accuracy of the examiner's stated interpretation of such items.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claims 51 and 53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 51 and 53, line 2, the claimed limitation "such information" is ambiguous. It is not clear what information be considered as "such information"?

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-13 and 38-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pairing Algorithm (The AccelRat Pairing Algorithm) in view of Mathews (US 6,053,823).

Claim 1: Pairing Algorithm discloses a method for determining competitive partners from among a plurality of participants in a selected one of a plurality of rounds in a competitive event wherein selected ones of said participants have an associated ranking. The method comprising the steps of selecting a first participant having a ranking that is higher than the respective rankings of all the remaining participants of the plurality of participants; allowing the first participant to select a second participant from the remaining of the participants (section Stronger Player

Privilege, lines 15-18). Pairing Algorithm does not explicitly disclose removing the first participant and the second participant from further consideration for the selected round; repeating the selecting, allowing and removing steps for obtaining a plurality of competitive partners; recording a winning and losing participant for each of competitive partners; and removing the losing participant of each competitive partner. However, since Pairing Algorithm discloses that the selected players have to choose between those who remain unpaired (section Stronger Player Privilege, lines 15-18) until all participants are paired and recording win-loss results (section Pairing Algorithm, lines 1-2; section Dynamic Ratings Update, lines 5-8), Pairing Algorithm obviously encompasses the steps removing the first participant and the second participant from further consideration for the selected round; repeating the selecting, allowing and removing steps for obtaining a plurality of competitive partners; recording a winning and losing participant for each of competitive partners. Mathews, further, discloses removing the losing participant for each of the competitive partner (col. 6, lines 36-47). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate removing the losing participant for each of the competitive partner from further participant in a competitive event as taught by Mathews to the Pairing Algorithm in order to facilitate determining a champion of an event.

Claims 2-3: organizing participants into a first group and a second group and associating a ranking with each participant (col. 3, lines 18-26).

Claims 4-5: Pairing Algorithm discloses determining the ranking in accordance with completion of a result of past competitive event (section Dynamic Ratings Update,

lines 5-8).

Claims 6 and 11: Mathews discloses sporting event (col. 1, lines 11-14).

Claim 7: including a computer processor including code which when executed performs a specific function would have been old and well known to a person of ordinary skill in the art at the time the invention was made.

Claims 8-9: Pairing Algorithm and Mathews are silent with allowing each winning participants to retain the associated ranking. However, assigning ranks to participants according to specific criteria would have been both well-known and obvious design choice according to a game designer's preference.

Claim 10: Pairing Algorithm discloses assigning a ranking to a participant of the round based on the performance in the round (section Dynamic Ratings Update, lines 6-7).

Claim 12: Pairing Algorithm discloses selecting participants from the group of individuals (section Stronger Player Privilege, lines 15-18).

Claim 13: since Pairing Algorithm discloses pairing round by round the participants (Pairing Algorithm, line 1), and Mathews discloses that the tournament is advanced to a champion game for determining a winner (col. 6, lines 46-47), Pairing Algorithm and Mathews obviously disclose repeating the steps of repeating the selecting, allowing, removing, repeating, recording and removing the losing participant until a single participant is remained.

Claims 38, 40-48: refer to discussion in claims 1-2, 4-10 and 12 above.

Claim 39: Mathews discloses each of the participants in the first group has a higher associated ranking than each of the participants in the second group (col. 3, lines 24-26).

Claim 49: randomly ranking participants in a group would have been both well-known and obvious design choice according to a game designer's preference.

Claims 50-53: Mathews discloses allowing the winning participant to further participate in the competitive event to determine a champion of the event (col. 6, lines 36-47). Further, recording winning and losing participants in a computer readable medium would have been well known to a person of ordinary skill in the art at the time the invention was made.

Response to Arguments

7. Applicant's arguments filed 12/7/05 have been fully considered but they are not persuasive.

With regards to 35 USC §101 rejection of claims 1-13 and 38-53, Claims 1-13 and 38-53 are directed to non-statutory subject matter that are not limited to the "technological arts". All the recited steps of the independent claim 1 and 38 could be performed manually by a human, thereby reinforcing the fact that the invention fails to "promote the progress of science and useful arts," as intended by the United States Constitution under Art. I, §8, cl.8 regarding patent protection.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim Nguyen whose telephone number is 571-272-

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4441. The examiner can normally be reached on Monday-Thursday during business hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xuan Thai, can be reached on 571-272-7147. The central official fax number for the organization where this application or proceeding is assigned is 571-273-8300.

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Date: November 25, 2006



Kim Nguyen
Primary Examiner
Art Unit 3713